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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,048	09/26/2001	Daniel Gizaw	FMCV 0187 PUS	2690
22045	7590	10/21/2003	EXAMINER	
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			TAMAI, KARI. I	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/965,048	GIZAW, DANIEL	
	Examiner	Art Unit	
	Tamai IE Karl	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7.17.03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 10-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>5/6/2003</u> . | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a crimp affixing the tube to the stator poles, rotating the tube while press fitting the tube on the stator to facilitate aligning the skewed interlocks with the skewed poles, and the skewed interlocks to match the stator poles must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification, such as: spelling errors (Page 1, line 10) "aw" instead of "are".

Claim Objections

3. Claim 3 is objected to because of the following informalities: misspelling "crimpt" instead of "crimp". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 20-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claims 20-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not enable or contain a full, clear, concise, and exact written description of the interlocks being skewed to match the stator poles. The specification does not disclose rotating the tube while press fitting the tube on the stator to facilitate aligning the skewed interlocks with the skewed poles. The skewed interlocks and rotating the tube are clearly new matter because they are not disclosed in the specification.

Claim Rejections - 35 USC § 102

6. The rejection of Claims 1, 8-12, 14-17, and 19 under 35 U.S.C. 102(b) over Hatsuda et al. (Hatsuda)(JP 11-230,088) is withdrawn.

7. The rejection of Claims 1-4, 7-9, 13, 14, 16, 17, 18, and 19 under 35 U.S.C. 102(b) over Takura et al. (Takura)(US 6,109,887) is withdrawn.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-7 and 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schob et al. (Schob)(US 6,053,705) and Stanley (US 5,266,859) and Gunderson. Schob teaches a pump with salient stator poles 7 interlocked with conduit 9 and magnetically driving a skewed reluctance rotor (fig 6). Schob teaches spaces between the stator poles. Schob teaches the tube 9 being non magnetic metal or plastic (col. 5, line 14). It is inherent that the conduit is part of the stator. The rotor being covered in a plastic coating 1f and including permanent magnets. The switched reluctance motor inherently being a DC switched current. The conduit for the rotor being an substantially air tight to allow the passage of the fluid through the pump. Schob teaches sensors 15 to determine the speed and position of the rotor. Schob teaches the drive can be reluctance, inductive or synchronous. Schob teaches every aspect of the invention except the rotor being laminated and the tube having interlocks extending between the stator poles, and the interlocks being press fit to the stator. Stanley teaches that stator and rotor laminations can be easily skewed during assembly to reduce noise during

operation. Gunderson teaches a tube which interlocks between the stator poles. Gunderson inherently teaches the interlocks matching the stator poles. The material of the tube expands to form a wrinkle into and between the stator poles (aka a crimp and also expanding to be press fit). The space between the wrinkles/crimps forming grooves into which the stator poles form tongue to inherently have a tongue and groove interlock. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Schob with the stator and rotor being laminated to provide easy assembly and reduced noise, as taught by Stanley, and with the tube of Gunderson to provide prevent leakage of fluid into the stator winding with minimal magnetic interference.

10. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schob et al. (Schob)(US 6,053,705) and Stanley (US 5,266,859) and O'Brien (US 2450982), in further view of Dunn (US 2730636). Schob teaches every aspect of the invention except the rotor being laminated and the tube having interlocks extending between the stator poles. Stanley teaches that stator and rotor laminations can be easily skewed during assembly to reduce noise during operation. O'Brien teaches the tube with interlocking protrusions being press fit to the stator to provide easy mounting and preventing rotation of the tube. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the pump of Schob, with the stator and rotor being laminated to provide easy assembly and reduced noise, as taught by Stanley with the sleeve press fit because it prevents rotation and provides easy mounting with the stator, as taught by O'Brien.

Response to Arguments

11. Applicant's arguments filed 7/17/2003 have been fully considered but they moot in view of the new grounds of rejection.

Conclusion

12. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

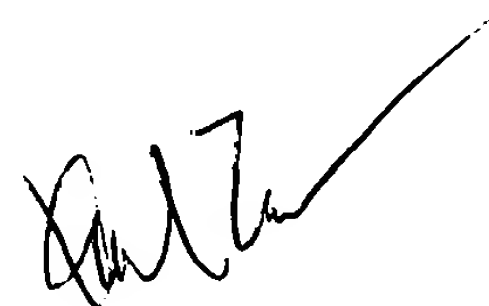
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066.

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The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nestor Ramirez, can be reached at (703) 308-1371. The facsimile number for the Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
October 15, 2003



KARL TAMAI
PRIMARY EXAMINER